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International Specialists in the Environment

TO: Pete Culver, RPO

THRU: John Caoile, FITOM

FROM: Ted Faile, E & E/FIT

DATE: July 7, 1988

SUBJECT: Review of work plan for the geophysical survey at the Midcoast Aviation, Inc. site located at Lambert International Airport, St. Louis, MO.
TDD# F-07-8806-001 PAN: FM00409EA
Superfund Contact: John Chen

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The procedures outlined in the geophysical survey work plan appear to be well thought out. The proposed survey grid and instrument recording procedures will satisfy the requirements within the consent order. However, there is one significant problem with the work plan which will have to be resolved. The consent order calls for both magnetic and electromagnetic techniques to be employed for identifying potential drum burials. Further, it was requested that each method be utilized over the **entire** survey area. (That is at every station point throughout the grid.) On page 4 of the work plan (9th line from top) it is stated that a Schonstadt magnetic locator will be used to further explore anomalies identified with the magnetometer. Other than the magnetometer, the Schonstadt is the only "geophysical" instrument mentioned in the work plan. Therefore, it would appear that this magnetic locator is intended to satisfy the requirement for an electromagnetic conductivity meter. Although I am not familiar with the Schonstadt instrument, my guess is that it is not much more than a metal detector and will not provide the same type of information as a conductivity meter. Although the contractors may still wish to use this magnetic locator to minimize the risk of puncturing a drum (as is outlined in the work plan) it is suggested that an electromagnetic conductivity survey be done in conjunction with the magnetometer survey, over the entire site, as originally stated in the consent order. Again, the purpose of the conductivity survey is to provide supplemental data about the subsurface conditions at the site. This will make interpretation of both the magnetic and conductivity data more meaningful, particularly in areas where there is significant surface debris. (Conductivity meters are generally less sensitive to such interference.) For the purposes of this survey, I would recommend the Geonics EM-31 Terrain Conductivity Meter as an appropriate electromagnetic device. This instrument is made by Geonics, Ltd. of Mississauga, Ontario, Canada and can be rented from the manufacturer on

a weekly basis. If you have any further questions, or require my assistance in this matter, please contact me.

cc: John Chen